

U.S. EPA Region 8 Mail Code: 8WP-SUI  
1595 Wynkoop Street  
Denver, CO 80202-1129  
Attention: Valois Shea

May 10, 2017

Dear EPA Region 8 representative,

I am writing to strongly urge you to deny the UIC Program Class V Area permits to construct and operate up to eight (8) deep injection wells within the Dewey-Burdock Project Boundary to be used for the disposal of treated uranium ISR process wastewater into the Minnelusa and Deadwood Formations.

My husband and I recently purchased property in Hot Springs & relocated here for the natural beauty, peace, clean air & water afforded to a less populated part of the country. This is intended to be our place of retirement. I am deeply concerned about the prospect of our final residence being degraded and devalued by the potential contamination of our water supply.

Our property, located at 2244 Minnekahta Ave, has a well in the Minnelusa Aquifer. The water is great and we currently use it extensively to grow organic vegetables, feed our animals as well as many other uses as needed outdoors. Since our property is 2 acres, it is large enough to sub-divide in the future if we so choose. Any additional structure we may build on our property could be tap into our well for potential household use. That is of course unless you approve this permit.

These proposed permits for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation is a real threat to our family, home & community. For numerous reasons including; 1) The mining industries recurrent inability to properly manage these materials safely, 2) The Black Hills geology is not static and the sheer movement of earth allows for the materials to flow into our aquifers, 3) Uranium is known to cause harm to human health & 4) The potential of increased seismic activity could result in our town losing it's greatest resource, our water.

Following are some specific scientific articles relating the evidence to these reasons I have just pointed out.

1)The Uranium mining industry does not have a very good history of being responsible for clean up nor preventing accidents. According to Lindsey Mclean, Biochemist & expert witness for NRC/ASLB in her Position statement she states, " Tennessee Valley Assoc drilled a total of 7650 boreholes looking for more mine-able/extractable uranium, but failed to find any. Powertech/Azarga was ordered by NRC/ASLB to find and properly close all of those boreholes before they would be able to actively mine, as ISL mining requires aquifers to be contained properly for extraction efficiency. This is a hugely expensive process and to date, no work has been done on this." Information obtained by; UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION ATOMIC SAFETY AND LICENSING BOARD Before Administrative Judges: William J. Froehlich, Chairman Dr. Mark O. Barnett Docket No. 40-9075-MLA ASLBP No. 10-898-02-MLA-BD01 Source link: <https://www.nrc.gov/docs/ML1512/ML15120A299.pdf>

According to a Sep 23, 2013 Rapid City Journal Article Titled 'Leaks, spills, and other problems at in situ uranium mines across the country' journalist Daniel Simmons-Ritchie sites eight examples of violations for other similar mining operations. [http://rapidcityjournal.com/news/leaks-spills-and-other-problems-at-in-situ-uranium-mines/article\\_694a875f-aa4e-5abd-9d23-2da9536acb73.html](http://rapidcityjournal.com/news/leaks-spills-and-other-problems-at-in-situ-uranium-mines/article_694a875f-aa4e-5abd-9d23-2da9536acb73.html)

More recently, on April 3rd, 2017 the U.S. Nuclear Regulatory Commission cited Cameco Resources dba Power Resources, Inc. with nine apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. Source: NRC INSPECTION REPORT 040-08964/2016-003.

2) In addition, I have recently learned that The hydrology of the Black Hills area is very complex. According to the USGS's website "Numerous fractures, faults, and solution cavities allow flow of water in rocks that otherwise are relatively impermeable" link source: <https://sd.water.usgs.gov/projects/bhhs/Intro.html>

In addition to the very common occurrences of spills, leakage and lack of proper containment as sited previously & the geological data that shows that rock is not impermeable and water can flow into our aquifers, Scientist from Arabian Journal of Chemistry state "Problems with Recovery of Mined Minerals When Organic Compounds Contaminate an Aquifer. Summary: You cannot recover all of the uranium from the mining water. Organified uranium compound levels will build up in the wastewater." Volume 4, Issue 4, October 2011, Pages 361–377.

3) With this inability to guarantee adequate protection comes real concerns to Human health. Science clearly shows the dangers of Uranium to the human body. Toxicology testimony by Linsey McLean, expert witness for NRC/ASLB on the birth deformities found in wildlife and domestic farm animals studied in ISL mining sites contaminated by toxic waste water and radioactive metals. Can be reviewed here: <https://www.nrc.gov/docs/ML1513/ML15132A507.pdf> and <https://www.nrc.gov/docs/ML1513/ML15132A506.pdf>

A study by the Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona, USA; Department of Physiology, College of Medicine, University of Arizona, Tucson, Arizona, USA Titled 'Drinking Water with Uranium below the U.S. EPA Water Standard Causes Estrogen Receptor–Dependent Responses in Female Mice'. Also provides evidence that uranium is an endocrine-disrupting chemical and populations exposed to environmental uranium should be followed for increased risk of fertility problems and reproductive cancers. Source: *JOURNAL ARTICLE Environmental Health Perspectives* Vol. 115, No. 12 (Dec., 2007), pp. 1711-1716 Published by: The National Institute of Environmental Health Sciences Stable URL: <http://www.jstor.org/stable/4540018>

Another study by the Argonne National Laboratory, EVS Human Health Fact Sheet, August 2005 points out a major health concern associated with uranium is kidney damage caused by the chemical toxicity of soluble uranium compounds. Source file can be found: [http://www.powertechexposed.com/Radium\\_Argonne%20National%20Lab.pdf](http://www.powertechexposed.com/Radium_Argonne%20National%20Lab.pdf)

As a Yoga Instructor, I spend a considerable amount of my time and money to stay healthy. Pumping our aquifer with the fluids containing uranium puts me, my family and our community at substantial health risks. Is the EPA going to pay for our long-term health care bills due to uranium exposure? Are you going to provide me, my family & community with clean drinking water the rest of my life?

4) Furthermore, our city was founded and continues to be dependent on our water supply for our economic well-being. So much so that our City Council recently approved a Resolution 2017-10: A Resolution to Reaffirm a Citywide Commitment for Clean Water and Water Resource Protection. From May 1st 2017 minutes: <https://drive.google.com/drive/folders/0B9KAiHzXN8kVVTRwMTB0VzJUQms>

One of the reasons for this is that our small City's invested approximately \$1.9 million to purchase Evans Plunge Mineral Springs, one of the Black Hills' oldest & popular tourist attractions. This resource generates an income of approximately \$800,000 per year according to our finance office at City Hall. We can simply not afford to risk one of our major resources.

According to studies published on the USGS website, "An unprecedented increase in earthquakes in the U.S. mid-continent began in 2009. Many of these earthquakes have been documented as induced by wastewater injection." from Journal article 'High-rate injection is associated with the increase in U.S. mid-continent seismicity' Science By: Matthew Weingarten, Shemin Ge, Jonathan W. Godt, Barbara A. Bekins, and Justin L. Rubinstein. Source link: <https://pubs.er.usgs.gov/publication/70161978>

Earthquakes have been know to cause springs to dry up. According to U.S. Geological Survey Fact Sheet 096-03 By Michelle Sneed, Devin L. Galloway and William L. Cunningham, "Hydrogeologic responses to earthquakes can create a variety of hazards. Water supply may be disrupted if wells go dry or become too turbid to pump, and infrastructure damage may result from ground motion." Source link: <https://pubs.usgs.gov/fs/fs-096-03/>

Let's face it, the applicant is in it to make money and does not care about the consequences to the public. It is your job to protect the public's access to clean water per the Safe Drinking Water Act. No exemptions should be made nor any permit be issued to mine Uranium nor dump toxic chemicals into our critical aquifers that are necessary to sustain life. Please use your conscious and legal obligations to the American public and deny these permits.

Thank you, 

**Ex. 6 Personal Privacy (PP)**